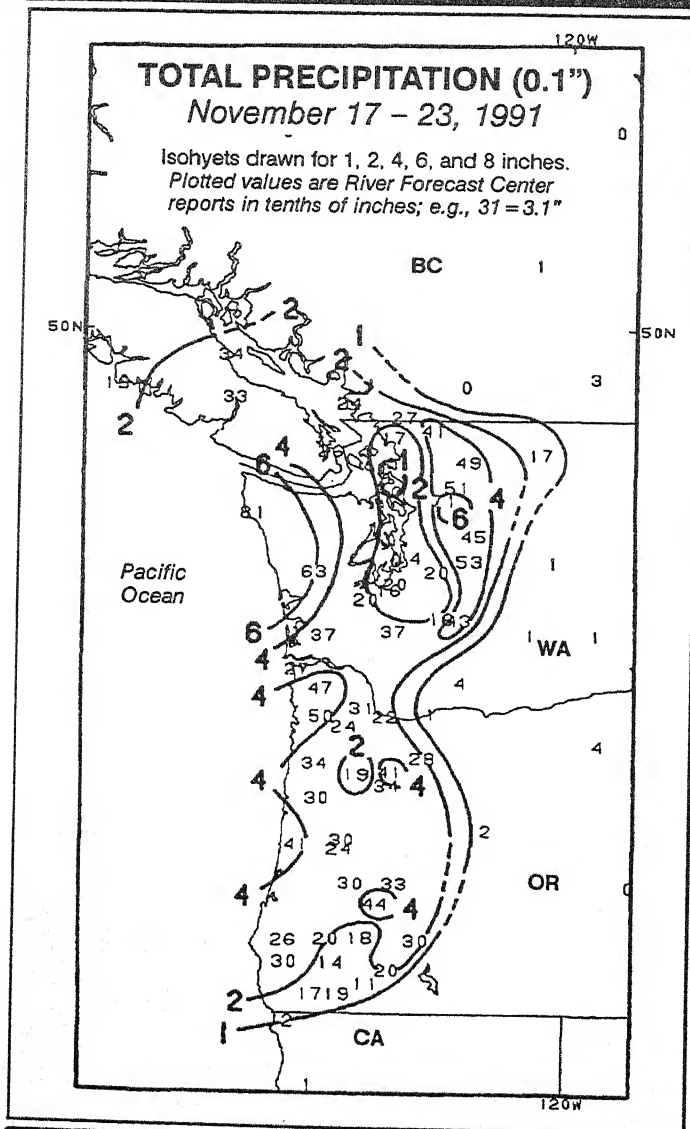


WEEKLY CLIMATE BULLETIN

No. 91/47

Washington, DC

November 23, 1991



Pacific storms battered the Pacific Northwest during the past week with heavy rain and high wind. Up to eight inches of precipitation drenched extreme western Washington while two to six inches were common west of the Cascades in Washington, Oregon, and southwestern British Columbia. A deep low pressure system early in the week spawned a rare outbreak of thunderstorms across the region, with hail and lightning strikes pounding the Puget Sound area. The lightning combined with winds gusting up to 80 mph to topple trees and power lines, cutting off electricity to 400,000 homes and businesses in western Washington, according to press reports



UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE-NATIONAL METEOROLOGICAL CENTER
CLIMATE ANALYSIS CENTER



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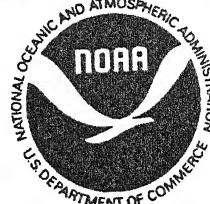
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GLOBAL CLIMATE HIGHLIGHTS

MAJOR CLIMATIC EVENTS AND ANOMALIES AS OF DECEMBER 19, 1992

1. Central and Southeastern United States:

MORE COLD AND WET WEATHER.

Weekly precipitation totals ranged from 40 to 150 mm as heavy rains soaked the southern Plains. Six-week moisture surpluses of 50 to 100 mm were widespread across the south-central states and reached 200 mm in parts of Louisiana and Oklahoma [7 weeks]. Temperatures averaged 5°C to 9°C below normal across the Rockies and High Plains, with subzero readings observed as far south as northern New Mexico [4 weeks].

2. Southern Bolivia:

TEMPERATURES MODERATE.

Near normal temperatures prevailed across much of Bolivia as the cool spell ended [Ended at 6 weeks].

3. Central South America:

WET CONDITIONS PERSIST.

Moderate rains (20 to 60 mm) dampened much of the region while northern Argentina and southern Paraguay received up to 80 mm of precipitation. Moisture surpluses of 60 to 160 mm accumulated since early November [6 weeks].

4. Central and Northern Europe:

WETNESS EASES IN MOST AREAS.

Relatively light amounts (under 20 mm) of rain were measured

across much of the region, but most of the British Isles and the south-central and southwestern sections of Scandinavia received 20 to 60 mm, with isolated totals approaching 150 mm. Despite the relatively dry week, six-week precipitation surpluses were as high as 300 mm in parts of Norway, Switzerland, and Austria [12 weeks].

5. Southwestern Europe and Northwestern Africa:

AREA STILL ABNORMALLY DRY.

Less than 30 mm of precipitation fell on most locations, but isolated heavier amounts (up to 50 mm) dampened southern Portugal, northern Algeria, and northern Morocco. Since early November, moisture deficits approached 150 mm in some places [7 weeks].

6. South-Central China:

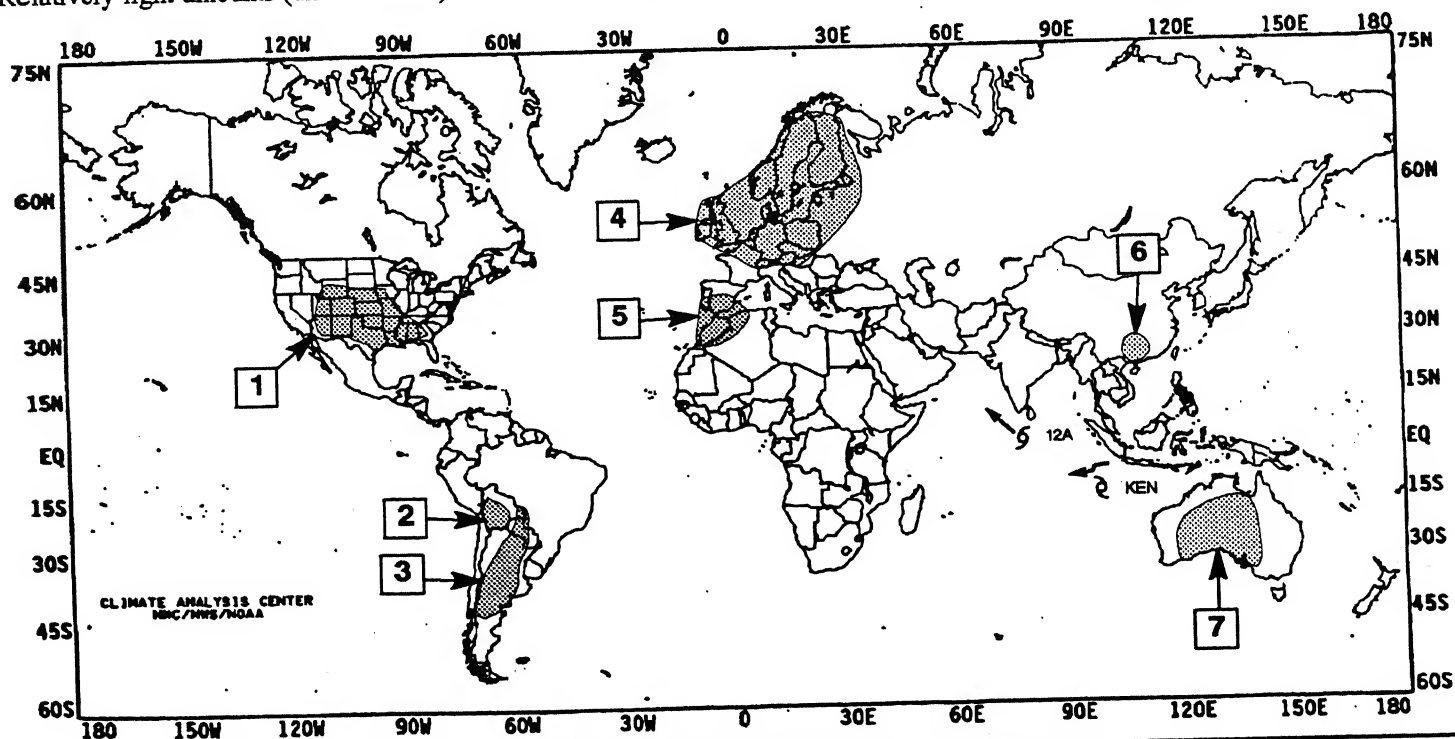
LIGHT RAINS BRING LIMITED RELIEF.

Generally less than 20 mm of rain was reported, but heavier amounts of 20 to 50 mm were recorded farther east. Precipitation shortfalls, however, declined in most areas as normals continued to drop with the approach of the typically dry time of year [Ended at 22 weeks].

7. Australia:

ANOTHER COOL SPELL.

Temperatures averaged as much as 5°C below normal as more unseasonably cool air moved across the region [7 weeks].



EXPLANATION

TEXT: Approximate duration of anomalies is in brackets. Precipitation amounts and temperature departures are this week's values.
MAP: Approximate locations of major anomalies and episodic events are shown. See other maps in this Bulletin for current two week temperature anomalies, four week precipitation anomalies, long-term anomalies, and other details.

UNITED STATES WEEKLY CLIMATE HIGHLIGHTS

FOR THE WEEK OF DECEMBER 13 – 19, 1992

Showers and thunderstorms developed along and ahead of a slow moving frontal system during the first part of the week, dumping heavy snow on the central Plains and southern High Plains and generating rain across the east-central and southeastern Plains and the western middle and lower Mississippi Valley. Up to a foot of rain inundated parts of the middle Red River Valley and western Ozarks, sending rivers out of their banks and forcing the closure of a number of roads. As much as ten inches of snow blanketed parts of west-central Kansas and the Texas panhandle while freezing rain from central Oklahoma to southern Minnesota and southern Wisconsin hindered traffic and forced school closures. As the frontal system edged eastward, intense thunderstorms again produced severe weather and heavy rain from the central Gulf coast to the southern Appalachians during the middle of the week. Farther west, a pair of Pacific storms systems swept inland, ushering in colder air and causing heavy rain along the northern Pacific seaboard and widespread snow across the interior Northwest, northern and central Intermountain West, northern and central Rockies, northern and central Plains, and upper Great Lakes.

As the week commenced, a frontal system became stationary from the northern Plains to the lower Rio Grande Valley. Snow whitened the central Plains and southern High Plains along the front while thunderstorms ahead of the system produced locally heavy rain from the middle Mississippi Valley to the southern Plains. Urban flooding was reported in Kansas City, MO, and freezing rain was responsible for numerous automobile accidents in Sioux City IA, on Monday. The system moved eastward into the Mississippi Valley on Tuesday, generating widespread rain from the upper Great Lakes to the central Gulf Coast. An intense thunderstorm spawned a tornado that damaged homes near Natchez, MS. Meanwhile, a Pacific storm raced across the Northwest and into the Rockies, spreading widespread snow through the higher elevations of Wyoming, Colorado, and Arizona.

At mid-week, warm and wet weather prevailed ahead of the slow eastward-moving cold front that stretched from the upper Great Lakes across the Ohio Valley and to the central Gulf Coast, with heavy rain soaking parts of Alaba-

ma and Georgia. Elsewhere, the Pacific cold front moved quickly through the West and Rockies and into the Upper Mississippi Valley and central Plains while a second Pacific front moved through the Northwest and into the northern and central Intermountain Plateau, accompanied by more rain and snow. Up to 30 inches buried portions of Utah on Friday. As the week ended, a third Pacific frontal system brought more precipitation to the northern Pacific coast.

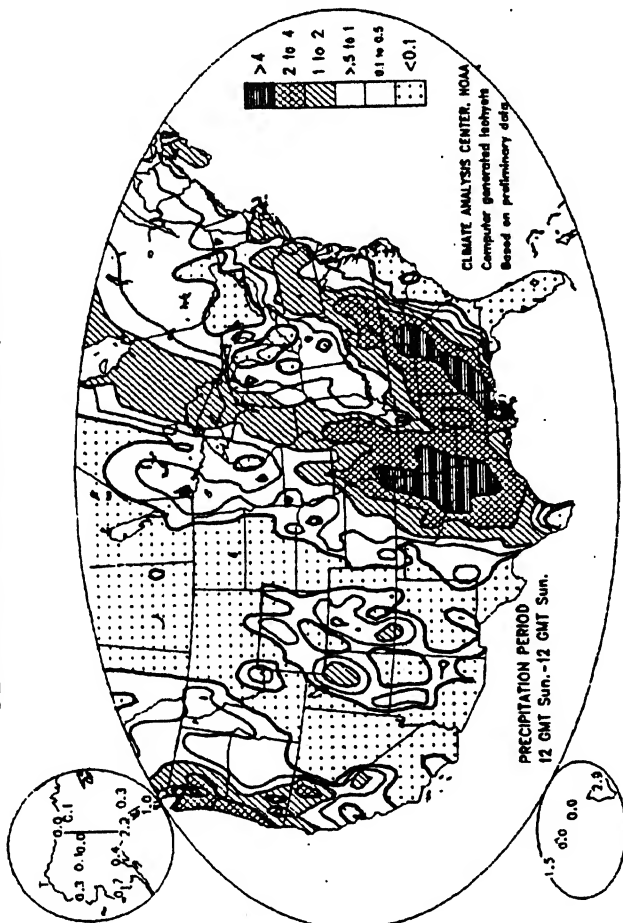
According to the River Forecast Centers, the greatest weekly precipitation totals (between four and thirteen inches) inundated northeastern Texas to southwestern Missouri. More than two inches of precipitation were measured from the central Gulf Coast to the central Appalachians, across the middle and lower Mississippi Valley, through the east-central and southern Plains, in the northern Pacific coast, across eastern Hawaii, and in portions of the Cascades and the Alaskan panhandle. Light to moderate amounts were observed in the Rockies, the Intermountain West, western Hawaii, and the remainders of the Pacific Coast states, the Great Plains, southern Alaska, and the eastern half of the nation. Little or no precipitation fell in northern and central Alaska and central Hawaii.

Warmer than normal conditions prevailed over most of the eastern half of the nation, with weekly departures of +5°F to +11°F observed in the Midwest and Northeast. Temperatures remained above freezing along the Gulf, southern Atlantic, and southern Pacific seabords. Unseasonably warm weather also prevailed in Hawaii, where temperatures averaged as much as 5°F more than normal. In Alaska, above normal temperatures were limited to the southeastern and southwestern portions of the state.

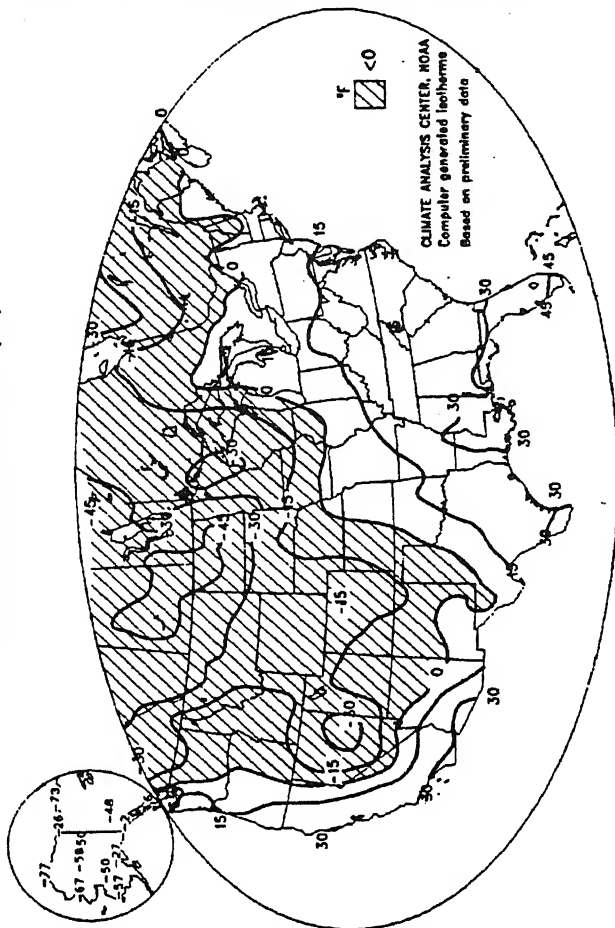
In contrast, unseasonably cold weather dominated the western half of the nation, where temperatures generally averaged in the teens except for extreme western and southern sections. Weekly departures between -6°F and -14°F were observed over most of the Intermountain West, Rockies, and central High Plains. Below normal temperatures were also observed across much of Alaska, with departures down to -6°F in the central and south-central portions of the state.

UNITED STATES WEEKLY CLIMATE CONDITIONS (December 13 – 19, 1992)

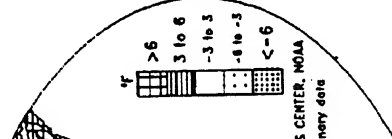
OBSERVED PRECIPITATION (INCHES)



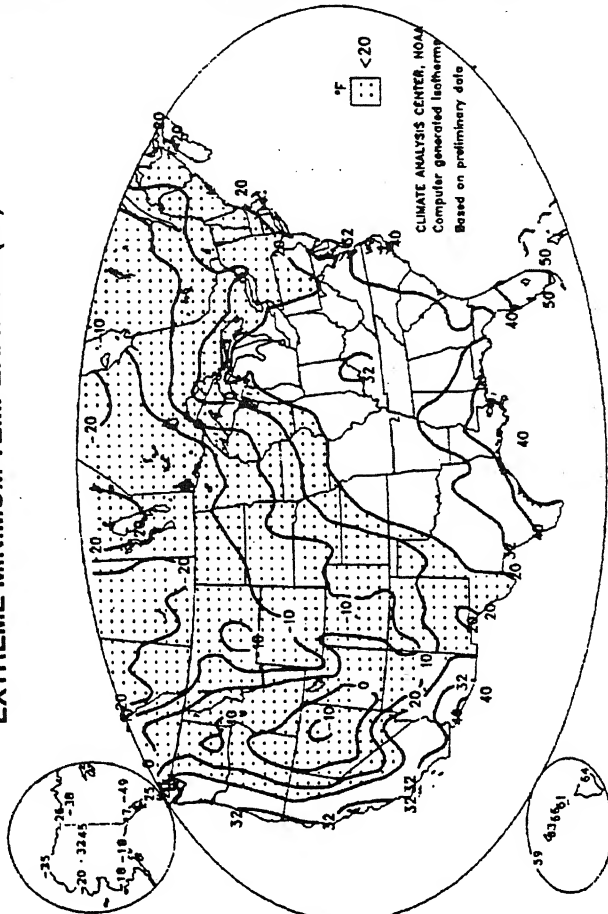
MINIMUM WIND CHILL (°F)



TEMPERATURE
(°F)

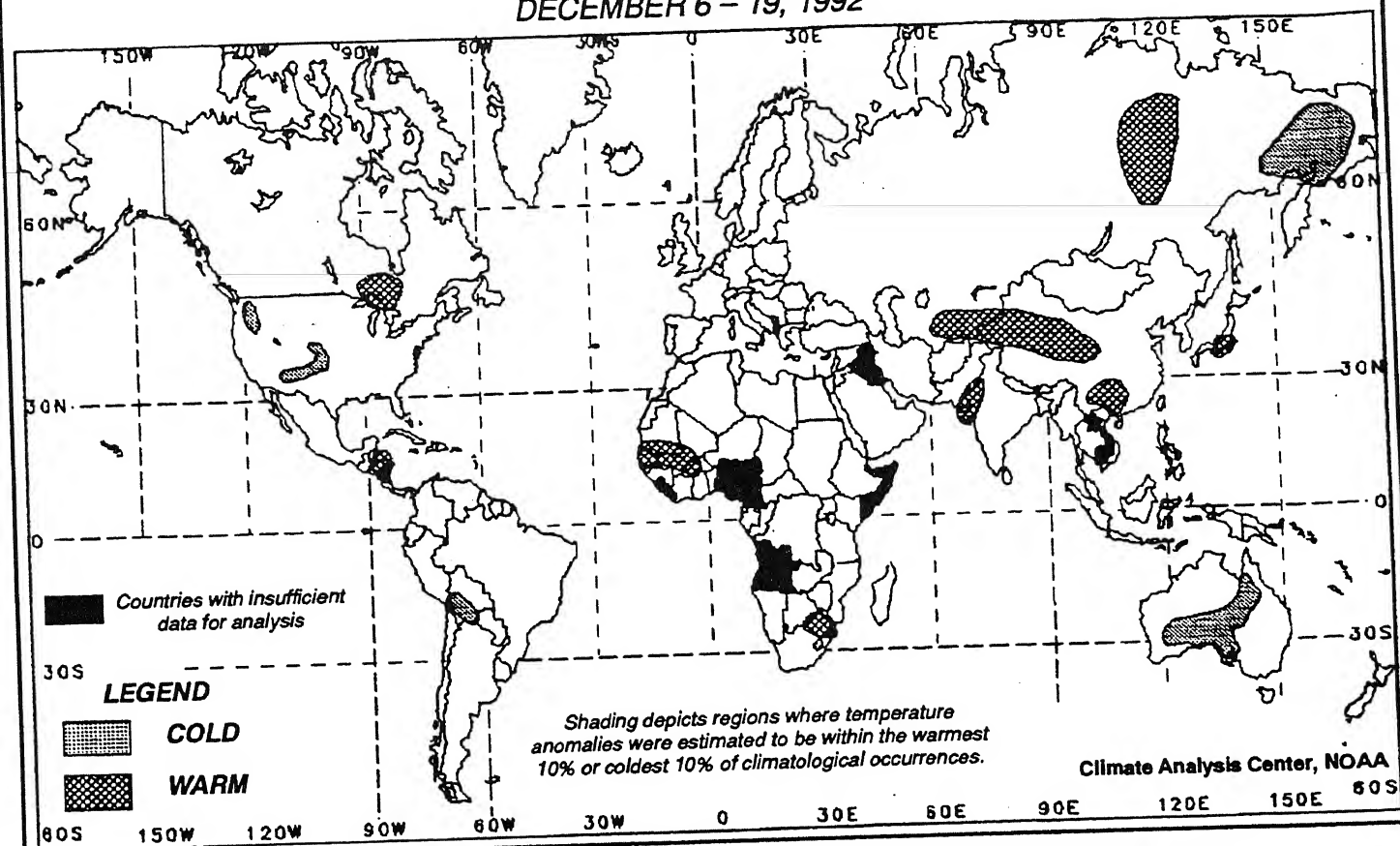


EXTREME MINIMUM TEMPERATURE (°F)



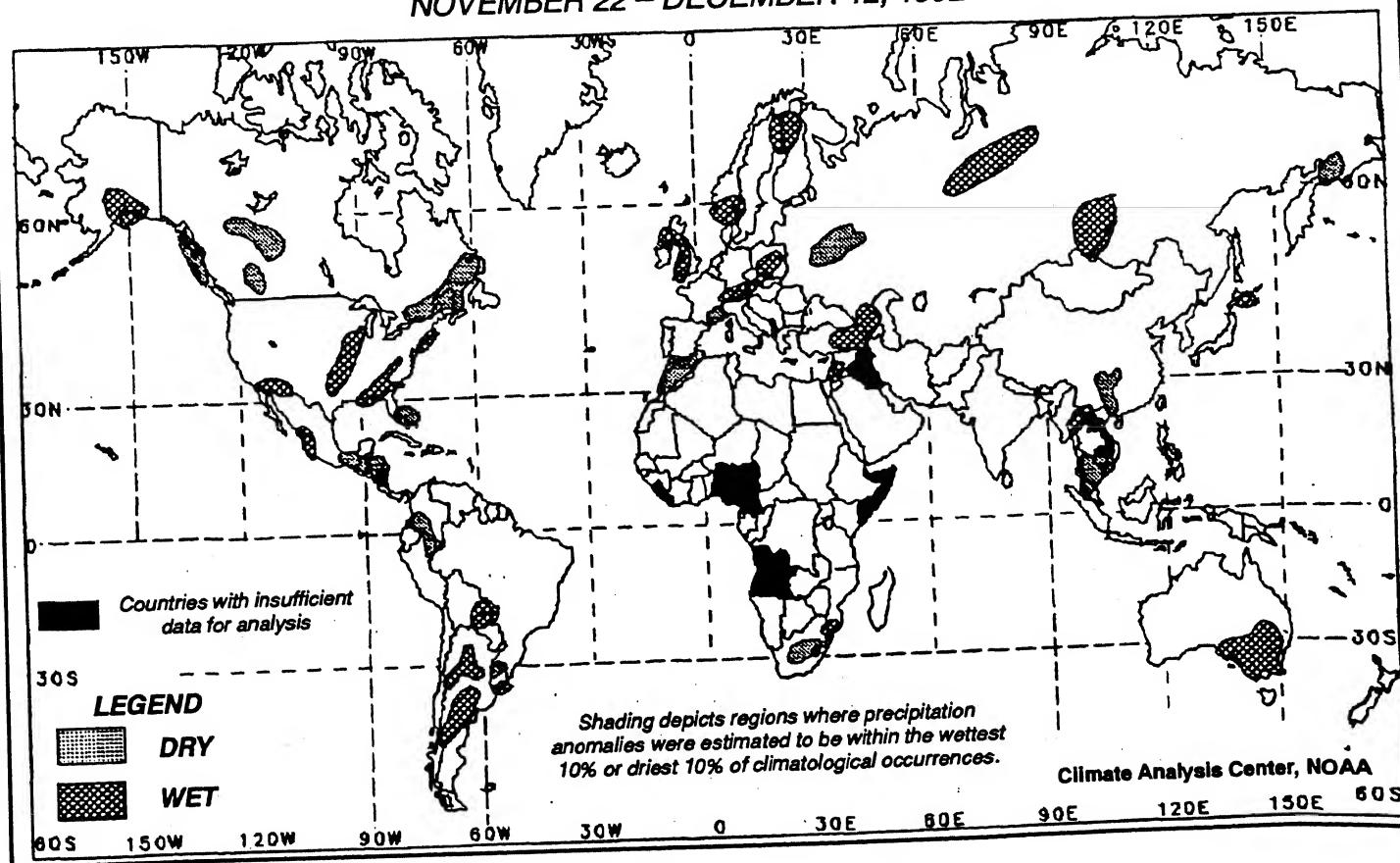
TWO-WEEK GLOBAL TEMPERATURE ANOMALIES

DECEMBER 6 - 19, 1992



FOUR-WEEK GLOBAL PRECIPITATION ANOMALIES

NOVEMBER 22 - DECEMBER 12, 1992



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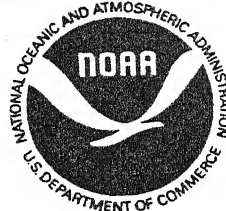
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